AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1-8. (Cancelled)

9-24. (Withdrawn)

25. (New) A method for deep cryogenic tempering of brake components, the method comprising the steps of:

(a) determining a mass and cross sectional area of the brake components;

(b) placing the brake components at a temperature within a cryogenic processing chamber;

(c) cooling the brake components at a descent rate, the descent rate being a function of the mass and the cross sectional area of the brake components, until the temperature of the brake components is approximately –300º F;

(c) maintaining the brake components temperature at –300º F for a stay time, the stay time being a function of the mass and the cross sectional area of the brake components;

(d) raising the temperature of the brake components to approximately 300º F at an ascent rate, the ascent rate being a function of the mass and the cross sectional area of the brake components;

(e) maintaining the temperature of the brake components at 300º F for a post temper time;

(f) lowering the temperature of the brake component to room temperature at a cool down rate;

(g) raising the temperature of the brake component to approximately 300º F at an ascent rate;

(h) maintaining the temperature of the brake component at 300º F for a post temper time; and

(i) lowering the temperature of the brake component to room temperature at a cool down rate.

26. (New) The method of Claim 25, wherein steps (g), (h), and (i) are repeated for a third post temper time.

27. (New) The method of Claim 26, wherein:

the temperature of the brake components is approximately 100 degrees F at step (a).

28. (New) The method of Claim 25 further comprising the step of:

raising the temperature of the brake components to approximately –100º F within the cryogenic processing chamber after step (c) and before step (d).

29. (New) The method of Claim 25 further comprising the step of transporting the brake components to a tempering oven during step (e).

30. (New) The method of Claim 25, wherein the cooling of the brake components is accomplished by introducing gaseous nitrogen into the cryogenic processing chamber.